

CLAIMS:

1. A tendon system for anchoring a floating platform to the seabed, comprising a tendon array including one or more steel tendons and one or more synthetic tendons.
2. The tendon system of claim 1 wherein said synthetic tendons are coaxially located within said steel tendons.
3. The tendon system of claim 1 wherein said synthetic tendons are carbon fiber composite tendons.
4. The tendon system of claim 2 wherein said floating platform is a single anchor leg mooring buoy anchored to the seabed by a single composite steel and carbon fiber composite tendon.
5. The tendon system of claim 1 including damping force means for inhibiting platform resonance motions , said damping force means connected to the seabed through steel or synthetic supplementary tendons or cables.
6. The tendon system of claim 5 wherein said damping force means is active.
7. The tendon system of claim 5 wherein said damping force means is passive.
8. The tendon system of claim 1 including passive tuned oscillator means for inhibiting platform resonance motions.
9. The tendon system of claim 1 includes active driven mass oscillator means for inhibiting platform resonance motions.